PTO/SB/05 (08-03)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| 11711177  |  |   | Attom         | Attorney Docket No.                        |                                      | LSR-013  |                             |                   |                              | _]     |  |  |
|---|--|---|---------------|--|--------------------------------------|--|-----------------------------|-------------------|------------------------------|--------|--|--|
| ■.  |  |   | First I       | nven                                       | tor                                  | Eric P. Krantz                                   |                             |                   |                              | ╝      |  |  |
| PATENT APPLICATION  |  |   |               |  |                                      |  |                             |                   | TO EFFECTIVELY               | $\neg$ |  |  |
| •   | NSMITTAL   | Title   | RI            | REDUCE A NON-ACTIVE DETECTION GAP OF       |                                      |  |                             |                   |                              |        |  |  |
| (Only for new nonprovisional applications under 37 CFR 1.53(b))   |  |   |               | Al   | AN OPTICAL SENSOR                    |  |                             |                   |                              | ↲      |  |  |
|   |  |   |               |  | Express Mail Label No. EL 9          |  |                             |                   | US                           | _9     |  |  |
|   | Π  | MS Patent Application   |               |  |                                      |  |                             |                   |                              |        |  |  |
| APPLICATION ELEMENTS  |  |   |               |  | ADDRESS TO: Commissioner for Patents |  |                             |                   |                              |        |  |  |
| See MPEP chapter 600 concerning utility patent application conten   |  |   |               | P.O. Box 1450<br>Alexandria, VA 22313-1450 |                                      |  |                             |                   |                              |        |  |  |
| Fee Transmittal Form (e.g., PTO/SB/17)  |  |   |               |  |                                      |  |                             |                   |                              |        |  |  |
| ் ட்ட (Submit ar  | (Submit an original, and a duplicate for fee processing)   |   |               |  |                                      | Computer Program (Appendix)                      |                             |                   |                              |        |  |  |
|   | Applicant claims small entity status.  8. Nucleotide and/or Amino Acid Sequence S (if applicable, all necessary)     |   |               |  |                                      |  | nce Submission              | 3                 |                              |        |  |  |
| 3. X Specifica  |  |   | 27 ]          |  |                                      | uter Read  | ••                          | n (CF             | RF)                          |        |  |  |
| (preferred  | (preferred arrangement set forth below)  b. Specification Sequence Listing on:                                       |   |               |  |                                      |  |                             |                   |                              |        |  |  |
|   |  | of the invention<br>e to Related Applications                           |               |  | i [                                  | 1 .  | or CD-R                     | -                 |                              |        |  |  |
| - Stater  | ment Rega  | urding Fed sponsored R & D<br>quence listing, a table,                  |               |  | c. Stater                            | J  |                             |                   | of above copies              |        |  |  |
| or a c  | computer p   | program listing appendix  |               | _  | <u> </u>                             |  |                             |                   | ·                            |        |  |  |
| - Brief S   | Summary (  | he Invention of the Invention   |               | _  | ACC                                  | OMPANY   | ING AP                      | PLI               | CATION PARTS                 | -      |  |  |
|   | Description<br>led Descrip   | n of the Drawings (if filed)<br>otion                                   |               | 9.   | X Assignm                            | nent Paper                                       | rs (cover s                 | shee              | t & document(s))             |        |  |  |
|   | - Claim(s) 37 CFR 3.73(b) Statement Power of   |   |               |  |                                      |  |                             | Power of Attorney |                              |        |  |  |
| 4. X Drawing  |  |   |               |  |                                      |  |                             | ١                 |                              |        |  |  |
| 5. Oath or Declar   | 5. Oath or Declaration [Total Sheets 8 ] 12. Information Disclosure Copies of IDS Statement (IDS)/PTO-1449 Citations |   |               |  |                                      |  |                             | ı                 |                              |        |  |  |
| a. X New  |  |   |               |  |                                      |  |                             |                   |                              |        |  |  |
|   |  | prior application (37 CFR 1.63(d))                                      | )             | 14.  |                                      | Receipt Po                                       |                             |                   |                              | ı      |  |  |
|   | 1  | ON OF INVENTOR(S)   |               | 15.  | Certified                            | Copy of  | Priority Do                 |                   |                              | ı      |  |  |
| Signed statement attached deleting inventor(s) [If foreign priority is claimed]   |  |   |               |  |                                      |  | 35 U.S.C. 122 (b)(2)(B)(i). | ı                 |                              |        |  |  |
|   |  |   |               |  |                                      | nt must attach form PTO/SB/35 or its equivalent. |                             |                   |                              |        |  |  |
| l   | Other:   |   |               |  |                                      |  |                             |                   | ı                            |        |  |  |
| 6. X Applicati  | ion Data   | Sheet. See 37 CFR 1.76  |               |  |                                      |  |                             |                   | 4.8***                       |        |  |  |
|   |  | PLICATION, check appropriate be<br>title, or in an Application Data She |               |  |                                      | nation belo                                      | ow and in                   | the               | first sentence of the        |        |  |  |
| specification following the title, or in an Application Data Sheet under 37 CFR 1.76:  Continuation  Divisional  Continuation-in-part (CIP) of prior application No.: |  |   |               |  |                                      |  |                             |                   |                              |        |  |  |
| Prior application   | ∟<br>n inform  | ation: Examiner   |               |  |                                      | Art Unit:  | -                           |                   |                              | - 1    |  |  |
|   |  | DIVISIONAL APPS only: The en  | tire disclosu | ire of                                     | the prior applic                     |  | which ar                    | n oat             | h or declaration is supplied | ı      |  |  |
|   |  | ed a part of the disclosure of the a                                    |               |  |                                      |  |                             |                   |                              | - 1    |  |  |
| reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.  19. CORRESPONDENCE ADDRESS  |  |   |               |  |                                      |  |                             |                   |                              |        |  |  |
| [J] 64.   | - Ab 1   |   |               |  |                                      |  | ^                           |                   |                              | ヿ      |  |  |
| X Custome   | er Numbe   | or: 0095  | 9             |  | OR                                   |  | Correspo                    | naer              | nce address below            |        |  |  |
| Name  |  | VE & COCKFIELD, LLP   |               |  |                                      |  |                             |                   | <del></del>                  |        |  |  |
|   | Ralpl  | n A. Loren  |               |  |                                      |  |                             |                   |                              | _      |  |  |
| Address 28 State Street   |  |   |               |  |                                      |  |                             |                   |                              |        |  |  |
| City Boston s   |  | State   | MA            |  |                                      | Zip Code   |                             | 02109             | ᅦ                            |        |  |  |
| Country   |  |   |               | (617) 227-7400                             |                                      |  | Fa                          | x                 | (617) 742-4214               |        |  |  |
| Name (Print/  | Туре)  | David J. Rikkers  |               |  | Registration N                       | lo. (Attom                                       | ey/Agent)                   |                   | 43,882                       | ī      |  |  |
|   |  |   |               |  | tober 20, 2003                       | 1  |                             |                   |                              |        |  |  |
| L   |  | Live  | / . (         | ~  | 11000                                |  |                             |                   |                              | J      |  |  |

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EL 931624102 US, in an envelope addressed to: MS Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below. Dela (David J. Rikkers)

Dated: October 20, 2003

Signature:



|  |                      | _                   |              |                   | (Form               | updated to reflect FY 2004 fees effect                       | tive 10/1/03 |  |  |
|--|----------------------|---------------------|--------------|-------------------|---------------------|--|--------------|--|--|
| EEE TOANGMITTAL  |                      |                     |              | Complete if Known |                     |  |              |  |  |
| FEE TRANSMITTAL  |                      | Application Number  |              |                   | er                  | Not Yet Assigned   |              |  |  |
| for FY 2004  |                      | Filing Date         |              |                   |                     | Concurrently Herewith  |              |  |  |
|  | First Named Inventor |                     |              | Inven             | tor                 | Eric P. Krantz   |              |  |  |
| Effective 10/01/2003, Patent fees are subject to annual revision.                                  |                      | Examiner Name       |              |                   |                     | Not Yet Assigned   |              |  |  |
| X Applicant claims small entity status. See 37 CFR 1.27  |                      | Art Unit            |              |                   |                     | N/A  |              |  |  |
| TOTAL AMOUNT OF PAYMENT (\$) 761.00  |                      | Attorney Docket No. |              |                   |                     | LSR-013  |              |  |  |
| METHOD OF PAYMENT (check all that apply)   |                      |                     |              | FEE               | CALCU               | ILATION (continued)  |              |  |  |
| Check Credit Money Other None  X Deposit Account:  |                      | ADDITIO             |              | FEES<br>Entity    |                     |  |              |  |  |
| Deposit Account 12-0080  | Fee                  | Fee                 | Fee          | Fee               | •                   | F D  |              |  |  |
| Number   | Code                 | (\$)                | Code         | (\$)              |                     | Fee Description  | Fee Paid     |  |  |
| Deposit<br>Account Lahive & Cockfield, LLP   | 1051                 | 130                 | 2051         | 65                | Surcharge           | e – late filing fee or oath                                  |              |  |  |
| Name The Director is authorized to: (check all that apply)   | 1052                 | 50                  | 2052         | 25                | Surcharge<br>sheet, | e - late provisional filing fee or cover                     |              |  |  |
| X Charge fee(s) indicated below X Credit any overpayments  | 1053                 | 130                 | 1053         | 130               | Non-Engl            | ish specification  |              |  |  |
| Charge any additional fee(s) during the pendency of this   | 1812                 | 2,520               | 1812         | 2.520             | For filing a        | request for ex parte reexamination                           |              |  |  |
|  | 1804                 | 920*                | 1804         | 920*              | _                   | ng publication of SIR prior to                               |              |  |  |
| Charge fee(s) indicated below, except for the filling fee to the above-identified deposit account. | 1805                 | 1.840°              | 1805         | 1 840*            | Requestir           | ng publication of SIR after                                  |              |  |  |
| FEE CALCULATION  | 1251                 | 110                 | 2251         | 55                | Examiner            | action<br>of for reply within first month                    |              |  |  |
| 1. BASIC FILING FEE  | 1252                 | 420                 | 2252         | 210               |                     | for reply within second month                                |              |  |  |
| Large Entity Small Entity  | 1253                 | 950                 | 2253         | 475               | Extension           | for reply within third month                                 |              |  |  |
| Fee Fee Fee Fee Pee Paid  Code (\$) Code (\$)  | 1254                 | 1,480               | 2254         | 740               | Extension           | for reply within fourth month                                |              |  |  |
| 1001 770 2001 385 Utility filing fee 385.00  | 1255                 | 2,010               | 2255         | 1,005             | Extension           | for reply within fifth month                                 |              |  |  |
| 1002 340 2002 170 Design filing fee  | 1401                 | 330                 | 2401         | 165               | Notice of           | Appeal   |              |  |  |
| 1003 530 2003 265 Plant filing fee   | 1402                 | 330                 | 2402         | 165               | Filing a bi         | rief in support of an appeal                                 |              |  |  |
| 1004 770 2004 385 Reissue filing fee   | 1403                 | 290                 | 2403         | 145               |                     | for oral hearing   | ļ            |  |  |
| 1005 160 2005 80 Provisional filing fee  | 1451                 | 1,510               | 1451         |                   |                     | institute a public use proceeding                            |              |  |  |
| SUBTOTAL (1) (\$) 385.00   | 1452                 | 110                 | 2452         | 55                |                     | revive – unavoidable   |              |  |  |
|  | 1453                 | 1,330               | 2453<br>2501 | 665               |                     | revive - unintentional                                       | <u> </u>     |  |  |
| 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE  Extra Fee from  | 1501                 | 1,330               | i            | 665               | -                   | ue fee (or reissue)  | <u> </u>     |  |  |
| Claims below Fee Paid  | 1502                 | 480                 | 2502         | 240               | Design is           |  |              |  |  |
| Total Claims 43 -20** = 23 x 9.00 = 207.00 Independent 6 2** = 23 x 9.00 = 110.00                  | 1503                 | 640                 | 2503         | 320               | Plant issu          |  |              |  |  |
| Claims 6 -3 = 3 x 43.00 = 129.00   | 1460                 | 130                 | 1460         | 130               |                     | to the Commissioner  | <u> </u>     |  |  |
| Multiple Dependent   | 1807                 | 50                  | 1807         | 50                | Processir           | ng fee under 37 CFR 1.17(q)                                  |              |  |  |
| Large Entity Small Entity  | 1806                 | 180                 | 1806         | 180               |                     | on of Information Disclosure Stmt                            | <u></u>      |  |  |
| Fee Fee Fee Fee Fee Fee Pescription  | 8021                 | 40                  | 8021         | 40                |                     | g each patent assignment per<br>(times number of properties) | 40.00        |  |  |
| 1202 18 2202 9 Claims in excess of 20<br>1201 86 2201 43 Independent claims in excess of 3         | 1809                 | 770                 | 2809         | 385               | Filing a st         | ubmission after final rejection<br>1.129(a))                 |              |  |  |
| 1203 290 2203 145 Multiple dependent claim, if not paid  | 1810                 | 770                 | 2810         | 385               |                     | additional invention to be<br>I (37CFR 1.129(b))             |              |  |  |
| 1204 86 2204 43 ** Reissue independent claims  | 1801                 | 770                 | 2801         | 385               |                     | for Continued Examination (RCE)                              |              |  |  |
| over original patent   | 1802                 | 900                 | 1802         | 900               | Request t           | for expedited examination                                    |              |  |  |
| 1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent                          | _                    | fee (spe            | į.           |                   | of a desig          | n application  | $\vdash$     |  |  |
| SUBTOTAL (2) (\$) 336.00   |                      | uced by I           |              | ling Fee          | Paid                | SUBTOTAL (3) (\$)  | 40.00        |  |  |
| **or number previously paid, if greater, For Reissues, see above                                   |                      |                     |              |                   |                     | 000.0.WE (0) [(4)  | →0.00        |  |  |

|                   | deposited with the U.S. Postal Service as Express Mail, Airbill No. EL 931624102 US, |
|-------------------|--|
|                   | ion, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the      |
| date shown below. |  |
|                   |  |

Registration No. (Attorney/Agept) 43,882

Dated: October 20, 2003

Name (Print/Type) David J. Rikkers

SUBMITTED BY

Signature: (David J. Rikkers)

(Complete (if applicable))

Telephone (617) 227-7400

October 20, 2003